

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :
Naganori SHIRAKATA et al. :
Serial No. NEW : **Attn: APPLICATION BRANCH**
Filed July 8, 2003 : Attorney Docket No. 2003_0941

MODULATOR, DEMODULATOR, AND
TRANSMISSION SYSTEM FOR USE
IN OFDM TRANSMISSION
(Rule 1.53(b) Divisional
of Serial No. 09/317,961,
Filed May 25, 1999)

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEES FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of [X] the references listed on attached form PTO-1449 and/or [] the additional information identified below in paragraph 3. A legible copy of each reference listed on the form PTO-1449 and each U.S. patent application listed below is enclosed, except a copy is not provided for each reference previously cited by or submitted to the Patent Office in prior parent application Serial No. 09/317,961.

1a. [X] This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, or

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

and thus no certification and/or fee is required.

1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

the certification of paragraph 2 below is provided, and

the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

2. It is hereby certified

a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or

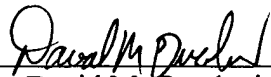
b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.

4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
 - b. ☒ a foreign patent office search report (in the English language) submitted herewith,
 - c. ☒ the concise explanation contained in the specification of the present application at page 4,
 - d. ☒ the concise explanation set forth in an English language abstract,
 - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☐ A foreign patent office search report citing one or more of the references is enclosed.

Respectfully submitted,

Naganori SHIRAKATA et al.

By 
David M. Ovedovitz
Registration No. 45,336
Attorney for Applicants

DMO/jmj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
July 8, 2003

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Date Submitted to PTO: July 8, 2003

ATTY DOCKET NO.
2003_0941SERIAL NO.
NEWAPPLICANT
Naganori SHIRAKATA et al.FILING DATE
July 8, 2003

GROUP

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,898,665	4/1999	Sawahashi et al.			
	AB	6,341,123	1/2002	Tsujishita et al.			
	AC	6,320,917	11/2001	Stott et al.			
	AD	6,130,915	10/2000	Hallier et al.			
	AE	5,987,063	11/1999	Rinne			
	AF	5,959,965	9/1999	Ohkubo et al.			
	AG	5,956,318	9/1999	Saeki			
	AH	5,946,292	8/1999	Tsujishita et al.			
	AI	5,822,323	10/1998	Kaneko et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AJ	0 618 697	10/1994	EP			X	
	AK	95 19671	7/1995	WO				
	AL	0 820 171	7/1998	EP				
	AM	5-83218	4/1993	JP			Abstract	
	AN	6-311134(JP2781946)	5/1998	JP			Abstract	

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AO	Moose, Paul H., entitled "DIFFERENTIALLY CODED MULTI-FREQUENCY MODULATION FOR DIGITAL COMMUNICATIONS", Proceedings of EUSIPCO-90 Fifth European Signal Processing Conference, Barcelona, Spain, September 18-21, 1990.
	AP	Nogami, H., et al., entitled "A FREQUENCY AND TIMING PERIOD ACQUISITION TECHNIQUE OF OFDM SYSTEMS", IECE Trans Commun., pp. 1135-1146, August 8, 1996.
	AQ	PATENT ABSTRACTS OF JAPAN, by Sato MAKOTO et al., entitled "OFDM SYNCHRONIZATION DEMODULATION CIRCUIT", dated April 16, 1996, 1 page.

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Date Submitted to PTO: July 8, 2003

ATTY DOCKET NO.
2003_0941SERIAL NO.
NEWAPPLICANT
Naganori SHIRAKATA et al.FILING DATE
July 8, 2003

GROUP

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,694,389	12/1997	Seki et al.			
	AB	5,838,734	11/1998	Wright			
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AJ	8-265293	10/1996	JP			Abstract	
	AK	10-75226(JP272286)	4/1998	JP			Abstract	
	AL	10-190609	7/1998	JP			Abstract	
	AM	8-125632	5/1996	JP			Abstract	
	AN							

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AO	
	AP	
	AQ	

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.